<u>IN THE CLAIMS</u>:

The following is a complete listing of the claims, and replaces all earlier versions and listings:

Claim 1 (currently amended): An image processing method comprising the steps of:

receiving an input color image signal;

determining whether or not an input color image signal received in the receiving step represents achromatic color;

correcting the input color image signal according to an observation condition to produce a corrected input color image signal; and

converting, after ~~the~~ said correcting step, the corrected input color image signal produced in the correcting step into an achromatic color image signal when it is determined in said determining step that the input color image signal represents achromatic color.

Claim 2: (previously presented): A method according to Claim 1, wherein the input color image signal depends on an input-side observation condition and is device-independent .

Claim 3: (previously presented): A method according to Claim 1, wherein the input color image signal is represented by an RGB color space according to a standard white point of input-side observation light.

Claim 4 (previously presented): A method according to Claim 1, wherein, in said correcting step, the input color image signal, which depends on an input-side observation condition, is transformed into a corrected input color image signal, which depends on an output-side observation condition, and

wherein, when the input color image signal, which depends on the input-side observation condition, is determined in the determining step to represent achromatic color, the achromatic color image signal produced in the converting step by converting the corrected input color image signal produce in the correcting step, is an achromatic color signal according to a standard white point of output-side observation light.

Claim 5 (previously presented): A method according to Claim 1, wherein the step further comprises the step of converting transforming a device-dependent input color image signal into a device-independent input color image signal based on an input profile, and

wherein whether or not said transforming step is executed depends on information in the input profile.

Claim 6 (previously presented): A method according to Claim 1, wherein whether or not said correcting step is executed depends on a user's manual instruction.

Claim 7 (previously presented): A method according to Claim 1, wherein the converting step further comprises converting the corrected input color image signal produced in the correcting step into an output-device-dependent color image signal based on an output profile.

Claim 8 (previously presented): An image processing apparatus comprising:

an input unit adapted to receive an input color image signal;

an achromatic color detection unit adapted to determine whether or not an input color image signal received by the input unit represents achromatic color;

a correction unit adapted to correct the input color image signal according to an observation condition to produce a corrected input color image signal; and

a conversion unit adapted to convert the corrected input color image signal produced by the correction unit into an achromatic color image signal determined by said achromatic color detection unit that the color image signal represents achromatic color.

Claim 9 (currently amended): A ~~recording~~ computer-readable storage medium ~~for~~ storing a computer-readable program executing an image processing method, said program comprising:

code for receiving an input color image signal;

code for determining whether or not a received input color image signal represents achromatic color;

code for correcting the input color image signal according to an observation condition to produce a corrected input color image signal; and

code for converting said corrected input color image signal produced by the code for correcting into an achromatic color image signal when it is determined by said code for determining that the input color image signal represents achromatic color.

Claim 10: (currently amended): A method according to claim 1, further comprising the steps of:

obtaining a conversion condition for converting the input color image signal into a device-independent color space based on a standard white point of input-side light; and

converting the input color image signal according to the conversion condition, ~~and~~

wherein said determining step includes determining whether or not the converted input color image signal represents achromatic color.

Claim 11: (previously presented): A method according to Claim 10, wherein the device-independent color space is defined by red, green and blue primary color components.

Claim 12: (previously presented): A method according to Claim 1, wherein the correction of the input color image signal according to the observation condition in said correcting step is based on a color appearance model which performs a non-linear correction.

Claims 13-15 (canceled).

Claim 16 (currently amended): An image processing method comprising the steps of:

converting, based on an input profile, an input-device-dependent color image signal to an input-device-independent color image signal, which depends on an input-side observation condition;

converting, using a conversion condition according to a ~~standard~~ white point of

the input-side observation condition, the input-device-independent color image signal, which is

depends on the input-side observation condition, to an input-device-independent color image

signal composed of a red component, a green component, and a blue component, and which

depends on the input-side observation condition;

correcting, using a non-linear model according to the input-side observation

condition and an output-side observation condition, the color image signal to generate a color

image signal according to the output-side observation condition;

converting, based on an output profile, the color image signal <u>produced in said</u>

<u>correcting step</u> according to the output-side observation condition to an output-device-dependent

color image signal;

outputting the color image signal <u>produced in said step of converting based on</u>

<u>the output profile</u>;

determining whether or not the color image signal represents achromatic color

by determining whether or not the red component, the green component, and the blue component,

composing the output-device-dependent color image signal, are approximately equal,

wherein, when it is determined in said determining step that the color image

signal represents achromatic color, ~~correcting~~ the color image signal <u>is corrected</u> according to the

output-side observation condition to represent achromatic color and ~~executing~~ said <u>step of</u>

converting ~~step~~ based on the output profile <u>is then executed</u>.

Claim 17 (previously presented): An image processing method according to

Claim 16, wherein, whether or not to execute said correcting step to generate the color image

signal which represents achromatic color depends on information acquired from the input profile and the output profile.

Claim 18 (currently amended): A ~~recording~~ <u>computer-readable storage</u> medium ~~for~~ storing a program executing an image processing method, said program comprising:

code for converting, based on an input profile, an input-device-dependent color image signal to an input-device-independent color image signal, which ~~is~~ depends on an input-side observation condition;

code for converting, using a conversion condition according to a ~~standard~~ white point of the input-side observation condition, the input-device-independent color image signal, which ~~is~~ depends on the input-side observation condition to an input-device-independent color image signal composed of a red component, a green component, and a blue component, and which depends on the input-side observation condition;

code for correcting, using a non-linear model according to the input-side observation condition and an output-side observation condition, the color image signal to generate a color image signal according to the output-side observation condition;

code for converting, based on an output profile, the color image signal <u>produced by execution of said code for correcting</u> according to the output-side observation condition to an output-device dependent color image signal;

code for outputting the color image signal <u>produced by execution of said code for converting based on the output profile</u>;

code for determining whether or not the color image signal represents achromatic color by determining whether or not the red component, the green component, and the blue component, comprising the color image signal, are approximately equal,

wherein, when it is determined [[in]] upon execution of said code for determining that the color image signal represents achromatic color, ~~correcting~~ the color image signal is corrected according to the output-side observation condition to represent achromatic color and ~~executing~~ said code for converting ~~step~~ based on the output profile is then executed.

Claim 19 (new): An image processing apparatus, comprising:

a converter, adapted to convert, based on an input profile, an input-device-dependent color image signal to an input-device-independent color image signal, which depends on an input-side observation condition;

a converter, adapted to convert, using a conversion condition according to a white point of the input-side observation condition, the input-device-independent color image signal, which is depends on the input-side observation condition, to an input-device-independent color image signal composed of a red component, a green component, and a blue component, and which depends on the input-side observation condition;

a correction unit, adapted to correct, using a non-linear model according to the input-side observation condition and an output-side observation condition, the color image signal to generate a color image signal according to the output-side observation condition;

a conversion unit, adapted to convert, based on an output profile, the color image signal after correction by said correction unit according to the output-side observation condition to an output-device-dependent color image signal;

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an output unit, adapted to output the color image signal converted by said conversion unit that converts based on the output profile;

a determination unit, adapted to determine whether or not the color image signal represents achromatic color by determining whether or not the red component, the green component, and the blue component, composing the output-device-dependent color image signal, are approximately equal,

wherein, when it is determined by said determination unit that the color image signal represents achromatic color, the color image signal is corrected by said correction unit according to the output-side observation condition to represent achromatic color and then is converted by said conversion unit that performs conversion based on the output profile.

Claim 20 (new): An image processing method according to Claim 16, wherein said step of converting using a conversion condition according to a white point uses a standard white point.

Claim 21 (new): A storage medium according to Claim 18, wherein said code for converting using a conversion condition according to a white point, effects conversion that uses a standard white point.

Claim 22 (new): An image processing apparatus according to Claim 19, wherein said conversion unit that converts using a conversion condition according to a white point uses a standard white point.